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09/684,075	10/08/2000	John Fors	0544MH-36340	2874

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Christopher W. Kennerly, Esq.
Baker Botts LLP
2001 Ross Avenue
Suite 600
Dallas, TX 75201-2980

EXAMINER

ROBINSON BOYCE, AKIBA K

ART UNIT PAPER NUMBER

3623

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/684,075

Applicant(s)

FORS, JOHN

Examiner

Akiba K Robinson-Boyce

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,5-22 and 24-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2, 3, 5-22, 24-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. Due to communications filed 10/7/04, the following is a final office action. Claims 1, 4, and 23 are cancelled. Claims 5-7, 15, 16, 22, 24-27, and 33 are amended. Claims 35-40 have been added. Claims 2, 3, 5-22, 24-40 are pending in this application and have been examined on the merits.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2, 3, 5-7, 9-11, 15, 17-19, 24-26, 28-30, 32, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sellers et al (US 5,311, 438), and further in view of Lesaint et al (6,578,005).

As per claims 7, 15, 26, 32, 34, Sellers et al discloses:

using the computer system, selecting a set of candidate products to be developed/a set of candidate products/select a set of candidate products to be developed/means for selecting a set of candidate products, (col. 79, lines 31-34, [submit a request for a new product]);

using the computer system, calculating a set of financial projections for each candidate product/a set of financial projections associated with each candidate product/calculate a set of financial projections for each candidate product/means for calculating a set of financial projections/means for calculating a set of financial projections for each candidate product, the set of financial projections for a candidate product providing a future profit determination for each of a set of possible product introduction dates for the candidate product, (col. 113, lines 44-49, [profitability index]);

using the computer system, providing at least one project definition/a set of project definitions/provide at least one project definition/mean for providing at least one project definition for each candidate product, such project definitions each including a development schedule and resource requirements, (Col. 8, lines 35-41, [material requirements planning function]);

using the computer system, providing a set of available resources/a set of available resources/provide a set of available resources/means for providing a set of available resources, (Col. 8, lines 42-43, [defines/maintains resources]); and

using the computer system, generating a development schedule/generate a development schedule/means for generating a development schedule for the set of candidate products to maximize profit...such that products more affected by time are scheduled for faster production than products less affected by time, the development schedule providing for product development in accordance with project definitions for each of the candidate products and resource constraints/a planning engine operable to: read in the set of candidate products, the sets of financial projections for the candidate

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products, the sets of project definitions for the candidate products, and the set of available resources; select a set of candidate products that meets all resource availability constraints and maximizes profits; generate a development schedule for the selected set of candidate products, (col. 87, lines 18-23, [reviewing production scheduling test specification] w/ Col. 89, lines 5-10, [browse results such a profitability], col. 107, lines 5-9, [project definition conversation used to define product development effort]).

Sellers et al fails to disclose using the computer system, for each candidate product, determining based on the set of financial projections an impact that the time of introduction has on profits associated with the candidate product, or maximizing profit based at least on the determined impact that the time of introduction has on profits associated with each of the candidate products and using the financial projections for the candidate products as a weighted factor in generating the development schedule/products more affected by time are scheduled for faster production than products less affected by time, but does disclose the process of facilitating new products in the abstract, lines 13-15.

However, Lesaint et al discloses:

for each candidate product, determining based on the set of financial projections an impact that the time of introduction has on profits associated with the candidate product, or maximizing profit based at least on the determined impact that the time of introduction has on profits associated with each of the candidate products and using the financial projections for the candidate products as a weighted factor in generating the

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development schedule/products more affected by time are scheduled for faster production than products less affected by time, (col. 12, line 52-Col. 13, line 9, [priority given to the tasks that can be done immediately, with the greatest importance score]). Lesaint et al discloses this limitation in an analogous art for the purpose of showing that the product schedules can be developed according to certain time constraints.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to use weighted factors in generating the development schedule such that products more affected by time are scheduled for faster production with the motivation of processing tasks that can be done immediately first.

As per claims 2, 24, Sellers et al discloses:

Wherein each project definition comprises a plurality of ordered tasks for developing the product associated with the project definition, each task comprising a time requirement, a resource requirement, and an ordering constraint with respect to the other tasks in the project definition, (col. 107, lines 5-9, [request priority, targeted commercial location and line, design category]).

As per claims 3, 6, 25, Sellers et al discloses:

wherein a candidate product includes at least two project definitions, the method comprising selecting one of the at least two project definitions in the development schedule for generating the development schedule/ a candidate product comprises at least two project definitions; and the planning engine selects one of the at least two project definitions for inclusion in the development schedule, (Col. 105, lines 49-51,

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[shows browsing of all design request {project definitions} detail screens for inclusion in development process]).

As per claim 5, Sellers et al discloses:

wherein the project definitions comprise a plurality of ordered tasks, with each task containing a time requirements, a resource requirement, and an ordering constraint with respect to the other tasks in the project definition, (col. 107, lines 5-9,[shows request priority, targeted commercial location and line, design category], w/ col. 179,lines 20-22, [shows there are tasks in the development process]).

As per claims 9, 17, 28, Sellers et al fails to disclose wherein the ordering constraint defines a sequence for the plurality of ordered tasks, the sequence providing one or more of the following: certain tasks must be completed before other tasks; and certain tasks may be completed in parallel with certain other tasks, but does disclose the process of facilitating new products in the abstract, lines 13-15.

However, Lesaint et al discloses:

wherein the ordering constraint defines a sequence for the plurality of ordered tasks, the sequence providing one or more of the following: certain tasks must be completed before other tasks; and certain tasks may be completed in parallel with certain other tasks, (col. 38, lines 52-54 and col. 13, lines 7-9, [sorted and scheduled in priority order according to processing times for tasks]). Lesaint et al discloses this limitation in an analogous art for the purpose of showing that products can be processed in accordance with time constraints.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to define a sequence for a plurality of ordered tasks with the motivation of defining a schedule for processing the tasks.

As per claims 10, 18, 29, Sellers et al fails to disclose wherein generating the development schedule comprises enforcing the ordering constraint when scheduling development of products, but does disclose the process of facilitating new products in the abstract, lines 13-15.

However, Lesaint et al discloses:

wherein generating the development schedule comprises enforcing the ordering constraint when scheduling development of products, (col. 21, lines 59-61, w/ col. 2, lines 9-12, [shows scheduling of software]). Lesaint et al discloses this limitation in an analogous art for the purpose of showing that the software product being developed in subject to scheduling processes.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to enforce the ordering constraint when scheduling development of products with the motivation of developing the products in a particular order.

As per claims 11, 19, 30, Sellers et al discloses:

wherein at least one project definition comprises one or more phases for development of the associated candidate product, each phase comprising one or more of the plurality of ordered tasks, (col. 145, lines 56-60, [states that design requests must pass through during production development]).

4. Claims 8, 14, 16, 22, 27, 33, 35-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sellers et al (US 5,311, 438), and further in view of Lesaint et al (6,578,005), and further in view of Baseman et al (US 6,671,673).

As per claims 8, 16, 27, neither Sellers et al nor Lesaint et al disclose determining, based at least on the sets of financial projections for the candidate products, which products would generate the greatest profits; and prioritizing the candidate products that would generate the greatest profits in generating the development schedule, but Sellers does disclose the process of facilitating new products in the abstract, lines 13-15.

However, Basemen et al discloses:

determining, based at least on the sets of financial projections for the candidate products, which products would generate the greatest profits; and prioritizing the candidate products that would generate the greatest profits in generating the development schedule, (Col. 21, line 59-Col. 22, line 2, [giving preference to customers who paid earliest if firm is constrained on cash], w/ Col. 22, lines 24-25, [maximizing profit]). Baseman et al discloses this limitation in an analogous art for the purpose of showing that preference is given to customers in order to increase revenue, therefore increasing profit.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to prioritize the candidate products that would generate the

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greatest profit with the motivation of generating a development schedule that would produce the greatest profits first.

As per claims 14, 22, 33, neither Sellers et al nor Lesaint et al disclose generating as an output a projected profit number in addition to the development schedule, however Sellers et al does disclose the process of facilitating new products in the abstract, lines 13-15.

However, Baseman et al discloses:

generating as an output a projected profit number in addition to the development schedule, (Col. 20, lines 50-86, [increasing revenue by accessing impact on profit and allocating output to customers]). Baseman discloses this limitation in an analogous art for the purpose of providing a profit value to customers.

It would have obvious to one of ordinary skill in the art at the time of the applicant's invention to generate as an output a projected profit number in addition to the development schedule with the motivation of providing the actual profit that would be accumulated for the phase of development.

As per claims 35, 37, 39, Sellers et al discloses:

the set of candidate products define a first product mix, (Col. 162, lines 22-27, each variation for item or product);

the generated development schedule for the first product mix comprises a first development schedule, (col 162, lines 44-49, item/spec information used for production scheduling); and

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generating as an output a first projected profit number for the first product mix in addition to generating the first development schedule/generate as an output a first projected profit number.../generate as an output a first projected profit number...(Col. 113, lines 32-49 discloses a profitability index);

changing, after generating the first development schedule for the first product mix and generating the first projected profit number for the first product mix, the set of candidate products in the first product mix to define a second product mix/change, after generating the first development schedule...(col. 163, lines 6, add, modify...physical specifications, w./ col. 162, lines 22-27, where it is shown that there is more than one variation for an item or product);

generating a second development schedule for the second product mix, and generating as an output a second projected profit number for the second product mix in addition to generating the second development schedule/generate a second development schedule...and generate as an output a second projected profit number...(col. 73 lines 15-30, lot split indicates splitting inventory items and therefore schedules and profit numbers);

Sellers fails to disclose enabling a user to compare the first development schedule and the second development schedule and to compare the first projected profit number and the second projected profit number to determine whether the first product mix or the second product mix is suitable, but does disclose one or more variation for an item or product which indicates a product mix in col. 162, lines 22-27.

However, Baseman discloses:

enabling a user to compare the first development schedule and the second development schedule and to compare the first projected profit number and the second projected profit number to determine whether the first product mix or the second product mix is suitable, but does disclose one or more variation for an item or product which indicates a product mix, (Col. 2, line 65-Col. 3, line 5, analyzes sources or profits and then compares planned and incurred costs). Baseman discloses this limitation in an analogous art for the purpose of incorporating investment planning.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to enable a user to compare the first development schedule and the second development schedule and to compare the first projected profit number and the second projected profit number to determine whether the first product mix or the second product mix is suitable with the motivation of determining which product plan is more appropriate.

As per claims 36, 38, 40, Sellers discloses:

wherein changing the set of candidate products in the first product mix to define a second product mix comprises one or more of: removing one or more of the products in the set of candidate products of the first product mix; adding one or more new products to the first product mix; and altering the project definition of one or more of the products in the set of candidate products of the first product mix, (col. 163, lines 6, add, modify...physical specifications).

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5. Claims 12, 13, 20, 21, 31, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sellers et al (US 5,311, 438), and further in view of Lesaint et al (6,578,005), and further in view of Miller (US 5,408,663).

As per claims 12, 20, 31, neither Sellers et al nor Lesaint et al disclose assigning

Assigning a probability of completion to each of the one or more phases, the probability of completion for use in allocating resources when generating the development schedule in accordance with the project definitions and the resource constraints, but Sellers does disclose the process of facilitating new products in the abstract, lines 13-15.

However, Miller discloses:

Assigning a probability of completion to each of the one or more phases, the probability of completion for use in allocating resources when generating the development schedule in accordance with the project definitions and the resource constraints, (Col. 12, line 65-col. 13, line 5, [probability of actual completion time]). Miller discloses this limitation in an analogous art for the purpose of showing that the probability of completion time is incorporated into a development phase.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to assign a probability of completion to each of the one or more phases, the probability of completion for use in allocating resources when generating the development schedule in accordance with the project definitions and the resource constraints with the motivation of determining approximately how long it would take for a phase to be completed.

As per claims 13, 21, 32, neither Sellers et al nor Lesaint et al disclose for each phase of product development, multiplying resources required for the phase by a product of the probability of completion for the phase and the probabilities of completion for all preceding phases, but Sellers does disclose the process of facilitating new products in the abstract, lines 13-15.

However, Miller discloses:

for each phase of product development, multiplying resources required for the phase by a product of the probability of completion for the phase and the probabilities of completion for all preceding phase, (col. 12, lines 23-27, [multiplying amount of time times the cost/unit time], (Col. 18, lines 13-16, [shows importance score multiplier], col. 13, lines 24-31, [multiplying cost per unit time of the resource assigned to meet that requirement by the amount of time required to meet the requirement where the cost per unit time of the resource assigned to meet the requirement represents the resource since the resource must be defined when determining the cost per unit time and the amount of time required to meet the requirement for that particular resource represents the probability of completion since the probability that the task will be completed depends on the amount of required time to complete the task. Miller discloses this limitation in an analogous art for the purpose of ultimately calculating the cost of a resource assigned to meet a requirement for that resource and also determining the overall effects.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to multiply resources required for the phase by a product of the

probability of completion for the phase and the probabilities of completion for all preceding phase with the motivation of determining how long it will take to complete a phase of the development process.

Response to Arguments

6. As per claim 34, the limitations of this claim were previously rejected in the last office action, however the actual claim number was not listed. Therefore, the examiner has included the number "34" in the rejection without changing the actual rejection.

7. Applicant's arguments filed 10/7/04 have been fully considered but they are not persuasive.

As per claim 7, the applicant argues that Sellers fails to disclose "selecting a portfolio of products to be developed" and instead merely discusses development of a single new product. However, Sellers et al discloses that more than one prototype can be developed for a design request, where prototypes actually become commercialized products in Col. 119, lines 45-53.

In addition, the applicant argues that Sellers fails to disclose "selecting a set of candidate products to be developed". The applicant argues that the request in Sellers (Col. 79, lines 32-35) is only for a single new product. However, as disclosed above in the preceding paragraph, Sellers et al discloses that more than one prototype, and ultimately more than one product can be developed in Col. 119, lines 45-53, therefore the request in Sellers applies to more than one or a set of products.

The applicant also argues that since Sellers fails to disclose “selecting a set of candidate products to be developed”, that Sellers necessarily fails to disclose “calculating a set of financial projections for each candidate product {in the set of candidate products], the set of financial projections for a candidate product providing a future profit determination for each of a set of possible product introduction dates for the candidate product”. However, this argument is moot due to the fact that Sellers discloses that more than one prototype, and ultimately more than one product can be developed in Col. 119, lines 45-53. In addition, the portions cited in Sellers, Col. 113, lines 32-49 disclose a profitability index, which represents the future profit determination of the present invention. The fact that this profitability index includes a financial simulation that includes the economic life of the product reflects financial projections for a candidate product providing a future profit determination for each of a set of possible product introduction dates for the candidate product as disclosed in the present invention.

In addition, the applicant also argues that Sellers fails to disclose “generating a development schedule for the set of candidate products to maximize profit...such that products more affected by time are scheduled for faster production than products less affected by time, the development schedule providing for product development in accordance with the project definitions for each of the candidate products and resource constraints”. However, Sellers discloses this limitation by disclosing that the project definition includes request priority, in col. 107 lines 5-9. The incorporation of request

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priority in the project definition represents scheduling for faster production according to time.

The applicant also argues that Sellers fails to disclose 'using the computer system, for each candidate product, determining based on the set of financial projections an impact that the time of introduction has on profits associated with each of the candidate products and using the financial projections as a weighted factor in generating the development schedule [such that] products more affected by time...". However, it is the combination of Sellers and Lesaint that discloses this limitation. First, as discussed above in the preceding paragraphs, Sellers discloses "selecting a portfolio of products to be developed". In addition, Lesaint specifically discloses, in col. 12, line 52-Col. 13, line 9 that priority is given to the tasks that can be done immediately, with the greatest importance score.

Further, the applicant argues that that the proposed Sellers-Lesaint combination is improper. However, this combination is proper since both references disclose systems that schedule the production of materials or resources as shown in Sellers in col. 8, lines 49-51 and in Lesaint, the abstract, lines 1-4.

Independent claims 15, 26 and 34 are rejected for the same reasons as disclosed with respect to independent claim 7.

Claims the depend from independent claims (8, and 12-14, 16 and 20-22, 27 and 31-33) are also rejected for the same reasons as discussed above with respect to the dependent claims.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is 703-305-1340. The examiner can normally be reached on Monday-Tuesday 8:30am-5pm, and Wednesday, 8:30 am-12:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 703-305-9643. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7238 [After final communications, labeled "Box AF"], 703-746-7239 [Official Communications], and 703-746-7150 [Informal/Draft Communications, labeled "PROPOSED" or "DRAFT"].

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

A. R. B.
January 18, 2005



TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600